PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

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PCT DUE DATE: 10-6-05
BY:

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Applicant's or agent's file reference 03-930-A	Date of mailing *(day/month/year)* 06 JUL 2005 FOR FURTHER ACTION See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US04/36179	01 November 2004 (01.11.2004)	31 October 2003 (31.10.2003)

International Patent Classification (IPC) or both national classification and IPC

IPC(7): G06K 7/10 and US Cl.: 235/472.01

Applicant

IOTA WIRELESS LLC

1. This opinion contains indications relating to the following items:

☒	Box No. I	Basis of the opinion
☐	Box No. II	Priority
☐	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
☐	Box No. IV	Lack of unity of invention
☒	Box No. V	Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
☐	Box No. VI	Certain documents cited
☒	Box No. VII	Certain defects in the international application
☐	Box No. VIII	Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(*b*) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/ US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230	Authorized officer Lisa M. Caputo Telephone No. 571-272-2388 DIANE I. LEE PRIMARY EXAMINER

Form PCT/ISA/237 (cover sheet) (January 2004)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
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Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).

2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

☐ a sequence listing

☐ table(s) related to the sequence listing

b. format of material

☐ in written format

☐ in computer readable form

c. time of filing/furnishing

☐ contained in international application as filed.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

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Box No. V Reasoned statement under Rule 43 *bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims 1-23	YES
	Claims NONE	NO
Inventive step (IS)	Claims NONE	YES
	Claims 1-23	NO
Industrial applicability (IA)	Claims 1-23	YES
	Claims NONE	NO

2. Citations and explanations:

Please See Continuation Sheet

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
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Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

The drawings are objected to under PCT Rule 66.2(a)(iii) as containing the following defect(s) in the form or content thereof:
Figure 1 should be labeled prior art.
There are no reference numbers on Figure 2, although the specification does indeed cite reference numbers for Figure 2.
Reference number 300 appears in the specification but does not appear on Figure 3.

WRITTEN OPINION OF THE
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Supplemental Box
In case the space in any of the preceding boxes is not sufficient.

V. 2. Citations and Explanations:

Claims 1-21 lack an inventive step under PCT Article 33(3) as being obvious over Hirshberg (U.S. Patent Application Publication No. 2002/0027549) in view of Kielsnia (U.S. Patent No. 6,449,363).

Hirshberg teaches a multi-functional keypad on a touch screen. Regarding claims 1, 9, and 18, Hirshberg teaches a system and method for data entry in a portable device comprising a keypad having a plurality of buttons (3x5 keypad with 4-way soft keys, e.g., 100, 102, 104 and three way soft key 106), at least one of the buttons being associated with two or more characters, a tilt sensor operable to detect a tilt on the keys, and a processor that is programmed to identify two or more characters based on one of the plurality of the buttons being pressed concurrently with the tilt subjected by the user (see Figures 1-5, paragraphs 46-56).

Regarding claims 1, 9, and 18, although Hirshberg teaches a tilt sensor with regards to the keys, Hirshberg fails to teach a tilt sensor that is operable to detect a tilt subjected to the portable device by the user.

Kielsnia teaches a safety tilt mechanism for a portable telephone including a speakerphone. Kielsnia discloses that a tilt sensor 108 detects the position of the orientation of the phone and can assess whether the speakerphone can be used based on the result of the tilt sensor (see Figures 1-2, col 1 line 45 to col 2 line 45).

In view of the teaching of Kielsnia, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the tilt sensor of Kielsnia to the system of Hirshberg because Kielsnia teaches a more comprehensive, overall tilt sensor which is better able to sense the movements of the entire keypad in concert with the movements of each key, for a better, more accurate reading.

Regarding claims 2-8, 10-17, and 19-21, Hirshberg teaches that the portable device is a mobile phone having a front face, left and right sides, a top and bottom, and that the keypad is a standard 12 button alphanumeric keypad on the front face of the phone (see paragraph 28). In addition, Hirshberg teaches that the tilt is detected along different axes and that a processor is used along with the tilt sensor (see paragraphs 15-28).

Claims 22-23 lack an inventive step under PCT Article 33(3) as being obvious over the prior art as applied in the immediately preceding paragraph and further in view of Mura (U.S. Patent Application Publication No. 2003/0003976).

Regarding claims 22-23, Hirshberg as modified by Kielsnia fails to teach the use of an acceleration sensor and a digital camera.

Mura teaches a memory card, PDA, information processing method, recording medium, and program. Mura discloses that the memory card 1 inserted into the PDA 60 has a tilt sensor 23 to detect a tilt angle, the memory card 1 can also have an acceleration sensor to detect acceleration applied thereto or a temperature sensor to detect temperature thereto. In addition, the PDA has additional features, such as speakers and a digital camera (see Figures 3-4, paragraphs 95-117).

In view of the teaching of Mura, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ an acceleration sensor because this additional feature is able to detect more information which makes for a more comprehensive system and a more efficient system (i.e. the keys on the keypad are better recognized). In addition, it would have been obvious to one of ordinary skill in the art at the time the invention was made

Supplemental Box
In case the space in any of the preceding boxes is not sufficient.

to employ a digital camera because digital cameras are also efficient objects to obtain information.

Claims 1-23 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry. For example, the system and method for data entry can be used by consumers in order to send and receive data and information more quickly and efficiently.